

Massachusetts Community and State College Recycling: Massachusetts College of Art

FINAL REPORT
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Submitted to:
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The Massachusetts College of Art Summary (Table 5)

Immediate issues at the Massachusetts College of Art are fibers and scrap metal.

Space is a critical concern at this institution. If adequate space can be freed up, using a self-contained compactor to manage all fibers (mixed paper plus cardboard) is economically and logistically the best option for MCA, generating savings of up to \$8,200 per year compared to current disposal practices. If MCA cannot provide space for a compactor, a combination of loose mixed paper pickup (in two-wheeled containers) and baling of cardboard is possible, generating savings up to \$3,800 per year.

MCA purges its sculpture studios of scrap metal at least twice a year. Historically, this scrap has been discarded. We recommend that a recycling container be brought in for a one- or two- week period for each of these purges, allowing MCA to capture and recycle the significant scrap metal tonnages that are now simply thrown out.

At some point, MCA will also need to add beverage containers to its recyclables. But for the moment, until a mixed paper and cardboard program is demonstrated, we believe that space constraints and logistical realities make it unwise to attempt the simultaneous startup of a container recycling effort.

MCA's current recycling rate is less than 5% (almost all in white office paper). With the recommended changes, the recycling rate should be brought up to at least 25%.

Massachusetts College of Art
Recycling Status, Issues, and Opportunities
Massachusetts College of Art

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Current Status

Mass. College of Art (MCA) faces significant recycling challenges related to its urban location and space-constrained facilities. Through mid-2003, its principal recycling initiative has been office paper collection through the Boston Public Schools' "Strive" program, but this program is no longer operating. It also has comprehensive recycling for electronic equipment and universal wastes. It does not recycle much of its mixed paper, cardboard, metal, bottles and cans, wood, or construction wastes, and has real problems with surplus property. Opportunities exist to enhance its recycling programs in many areas, which should generate net financial benefits without overburdening facilities staff – or the physical facility itself.

Issues / Opportunities

We have identified additional recycling opportunities in four areas:

- **Mixed Paper Recycling:** MCA needs to replace its relationship with the "Strive" program, and should pursue comprehensive mixed paper recycling – to increase its recycling rate, achieve savings of approximately \$130/ton in avoided disposal costs, and come into compliance with Massachusetts' recycling mandates.

MCA should evaluate the logistics and costs of moving to an "anything that tears" paper specification, with pickup either in totes or a compactor (see below). The cost of the service will be partially offset by paper revenues, which will be enhanced because of the proportion of high quality artists papers in the mix.

- **Cardboard Recycling:** MCA has two options to recycle cardboard (which is also on the Commonwealth's mandatory recycling list). Cardboard can be baled. We believe that adequate space is available to house a baler, and that cost-effective transportation can be arranged for quantities as small as 2 to 4 bales. Alternatively, cardboard can be recycled in a compactor in a single stream with other mixed paper. We believe that both options should be more fully evaluated.
- **Beverage Containers:** This can be a straightforward program for a two- or three-building campus like MCA's. Containers can be collected in bags and then held in totes for once-a-week collection. If a service provider can be found to provide the flexibility, collected containers can be hauled along with totes of mixed paper, or in a milk run collection that also takes fibers and/or containers from other nearby institutions.
- **Scrap Metal:** Two or three times a year, Mass. College of Art purges scrap metal from its sculpture studios. This metal is now discarded with mixed debris. The College should immediately implement a simple program to recycle this metal, by calling for a dedicated recycling container each time it cleans out its metal supply.

- **Wood:** In the past the College has recycled pallets – of which it receives a large number – on a dedicated collection route. This practice should be re-evaluated, and should probably be re-started, especially given that pallets are very expensive to dispose of as a component of mixed trash. (Massachusetts’ proposed ban on disposal of clean wood waste provides additional incentive to start this program again.)
- **Surplus Property:** The Commonwealth’s surplus property management program is not working well for the Mass. College of Art. Large volumes of surplus are being stored. Much of it can and should be purged from asset inventories and then re-sold, donated, or recycled as wood or scrap metal.

**Massachusetts College of Art
Massachusetts Community/State College Recycling: Current Practices and Potential Modifications**

Institution: Mass. College of Art Contact: Howard Larosee Jr.		Phone: 617-879-7938	Site Visit Date: 6/18/03 Email: hlarosee@massart.edu
Material	Current Practice	Comments/Notes	Recommended Modifications
Mixed Office Paper (unshredded)	No program after loss of Boston Public Schools "Strive" program.	Approx. 14 tons/year of white office formerly recycled through Strive. Majority of mixed color and all other paper (ONP, OMG, art papers) was not recycled. No recycling in dormitories.	Evaluate options: 1) Full mix (office, colored, ONP, OMG) in toters. Potentially attractive because of value in artists' papers; 2) Full mix of OCC plus all mixed paper in compactor (possible with IRN market). Assure dormitories are included in program.
Newspaper/Magazine Mix	Not recycled.	See above.	See above. Assure dormitories are given recycling opportunity.
Confidential Documents	No organized program. Some is shredded in individual offices. Of this some may be recycled, the balance is discarded.		Assure all confidential information is destroyed. Assure that shredded paper is collected with other recycled paper.
Cardboard	Not recycled.		See Option 2, above. If OCC/MP is not feasible, consider option of baling, with milk run pickup of small number of bales (along with toters of MP).
Containers (beverage and tin cans)	Not recycled.	Expense of container collection is a valid concern.	Evaluate collection in bags in toters, with 1x per week pickup.
Scrap Metal	Not recycled.	Large quantity of scrap metal is generated in 2x or 3x per year purges.	Bring in dedicated metal container for 2x or 3x per year purge.
Wood Waste	Not recycled.	Large n of pallets received with art supplies. Used IRN pallet run at one time, but drifted away. Currently discarded to rolloff (very expensive because pallets consume so much volume).	Re-evaluate cost/benefit of pallet pickup and return to pallet pickup if cost is justified.

Massachusetts College of Art
Massachusetts Community/State College Recycling: Current Practices and Potential Modifications

Institution: Mass. College of Art
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Site Visit Date: 6/18/03
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Material	Current Practice	Comments/Notes	Recommended Modifications
Computers/Electronic Equipment	Recycled through the IRN. Milk run collection in gaylords.	Approx. 8,000 lbs/year	
Fluorescent Lamps & Ballasts (Universal wastes)	Recycled through the IRN. Collected in a secure location in fiber drums. Co-collected on electronics milk run.		
Batteries	Recycled (with electronics and universals) through the IRN.		
Surplus Property	In theory, use state system. In practice, most sits in storage (half of 4 th floor is full of used furniture).	Big problem. Major need for organized program to triage and purge.	Need faster and more efficient triage and purge. Items still on asset inventory need to go through state system. Otherwise find donation or resale option, or else recycle immediately as metal (see Scrap Metal) or discard.
Construction/Demolition	Not recycled.	Many small in-house projects, but very little space for recycling containers.	Evaluate on project-by-project basis to determine if volume and value of materials warrant recycling.

**Massachusetts College of Art
Cost of Recommended Recycling Program Enhancements**

Fibers

Recommendation, Option 1: Mixed paper collected in toters; weekly pickup (to North Shore Recycled Fibers). Cardboard baled, weekly pickup (to NSRF)

Estimated Cost of Fiber Recycling Program with Toters (MP) and Baler (OCC), Mass College of Art		
Item	Units	Value
Estimated Fiber Generation, MP	Tons/Yr	28
Estimated Generation, OCC	Tons/Yr	42
Current Recovery, MP	Tons/Yr	0
Current Recovery, OCC	Tons/Yr	0
Capture of Mixed Paper at 80% Recycling Rate	Tons/Yr	22.4
Capture of Cardboard at 80% Recycling Rate	Tons/Yr	33.6
Cost of Current Fiber Recycling Program	\$/Yr	\$0
Baler		
Purchase	\$	\$9,350
4-Year Lease-to-Own	\$/Yr	\$2,845
Cost Per Pickup, Carrying MP + OCC	\$/Pickup	\$125
Tons Per Pickup, MP + OCC	Tons/Pickup	1.3
Total Pickups Per Year	Hauls/Yr	43.1
Total Annual Cost of Pickups	\$/Yr	\$5,385
Revenue, Mixed Paper + OCC	\$/Ton	\$25
Total Annual Revenues, Mixed Paper + OCC	\$/Yr	\$1,400
Avoided Disposal Cost (Haul + Tip)	\$/Ton	\$125
Avoided Disposal Cost, Total	\$/Yr	\$7,000
Annual Recycling Cost(Revenue) with Baler Purchase	\$/Year	\$3,985
Annual Recycling Cost(Revenue) with 4-Year Lease-to-Own	\$/Year	\$6,829
Net Annual Cost(Savings) after Avoided Disposal Cost, Purchase	\$/Year	(\$3,015)
Net Annual Cost(Savings) after Avoided Disposal Cost, 4-Yr LTO	\$/Year	(\$171)

Recommendation, Option 2: Mixed paper plus cardboard to self-contained compactor. Full compactor delivered to market and returned.

Estimated Cost of Fiber Recycling Program with Self-Contained Compactor, Mass College of Art		
Item	Units	Value
Estimated Fiber Generation, MP	Tons/Yr	28
Estimated Generation, OCC	Tons/Yr	42
Current Recovery, MP	Tons/Yr	0
Current Recovery, OCC	Tons/Yr	0
Estimated Capture of Mixed Paper at 80% Recycling Rate	Tons/Yr	22.4
Estimated Capture of OCC at 80% Recycling Rate	Tons/Yr	33.6
Cost of Current Fiber Recycling Program	\$/Yr	\$0
Self-Contained Compactor		
Purchase	\$	\$17,590
4-Year Lease-to-Own	\$/Yr	\$5,455
Cost Per Haul (Pickup full compactor, deliver to mkt, return to MCA)	\$/Haul	\$160
Tons Per Haul	Tons/Haul	5.0
Total Hauls Per Year	Hauls/Yr	11.2
Total Annual Cost of Hauls	\$/Yr	\$1,792
Revenue, Mixed Paper + OCC	\$/Ton	\$25
Total Annual Revenues, Mixed Paper + OCC	\$/Yr	\$1,400
Avoided Disposal Cost (Haul + Tip)	\$/Ton	\$125
Avoided Disposal Cost, Total	\$/Yr	\$7,000
Annual Recycling Cost(Revenue) with Baler Purchase	\$/Year	\$392
Annual Recycling Cost(Revenue) with 4-Year Lease-to-Own	\$/Year	\$5,847
Net Annual Cost(Savings) after Avoided Disposal Cost, Purchase	\$/Year	(\$6,608)
Net Annual Cost(Savings) after Avoided Disposal Cost, 4-Yr LTO	\$/Year	(\$1,153)

Recommendation: Purchase additional recycling containers

Cost of Recommended Recycling Supplies, Mass. College of Art			
Item	Number	Unit Cost	Total Cost
Deskside recycling bins	35	\$4.50	\$158
95-gallon wheeled recycling containers with slot tops (Schaefer or equivalent)	15	\$100	\$1,500
18 Bushel Hampers	6	\$185	\$1,110
Total			\$2,768